FACT SHEET - JULY 1998

Environmental Health

Educating Washington residents, about exposures to toxic chemicals released into the environment, for a healthier tomorrow.

Drinking Water Wells - Bainbridge Island, WA

HEALTH CONSULTATION FINDINGS

DOH WAS ASKED TO EVALUATE WELL DATA

In February, the Department of Ecology (Ecology) contacted the Department of Health (DOH) because of a concern for residents living near the Bainbridge Island Landfill, some of whose drinking water wells were found to have vinyl chloride and other contaminants. Ecology asked DOH to evaluate results of drinking water sampling data from about 20 drinking water wells to determine if there is a potential short-term health risk from exposure to the contaminants.

Location

Most of the wells sampled are located within a half mile (north & northeast) of the Bainbridge Island Landfill. The 40 acre landfill is west of Eagle Harbor on Bainbridge Island.

DOH is finalizing a Health Consultation document to present the findings. It should be available by the end of August. The Health Consultation only addresses the sampling data and doesn't identify the source of contamination. Ecology is working to confirm the source and will continue to inform residents on their progress.

This fact sheet summarizes the Health Consultation and DOH's recommendations for protecting public health.

DOH CONCLUSION

Based on the evaluation of all existing data, DOH has determined that no significant health risk exists from exposure to contaminants detected in the drinking water wells.

WELL SAMPLING DATA RESULTS

Kitsap County Public Works has been sampling about 20 domestic drinking water wells for various contaminants since 1996. After evaluating the sampling data, DOH found four contaminants which required further evaluation: arsenic (well BOW31A), lead (well BOW64), manganese (well BOW12), and vinyl chloride (well BOW37).

CONTAMINANTS IN WELL WATER

DOH evaluated the health risk from exposure to the four contaminants previously listed and concluded the following:

- There is no significant short-term (1-5 years) health risk from exposure to any of the contaminants detected in the domestic drinking water wells sampled.
- Long-term exposure to the maximum ***vinyl chloride*** concentration found could pose a very low increased cancer risk. However, the vinyl chloride concentration dropped to one half the maximum concentration in follow-up samples which would pose an even lower risk. (The highest vinyl chloride detections were from one well.)

Very low increased cancer risk is defined as one additional cancer in a population of 100,000 people over a 70-year lifetime.

- Long-term exposure to the maximum ***arsenic*** concentration found, could pose a low increased cancer risk. However, the arsenic concentration dropped to one-third the maximum concentration in a follow-up sample which would pose an even lower risk. (Arsenic was only found at an elevated level in one well.)

  Low increased cancer risk is defined as one additional cancer in a population of 10,000 people over a 70-year lifetime.

- Long-term exposure to the maximum ***lead*** concentration found is not expected to increase blood lead levels in children, who are most at risk, above the Centers for Disease Control's level of concern. Also, a follow-up sample showed a large drop in the level of lead found. (Lead was only found at an elevated level in one well.)
- Long-term exposure to the maximum ***manganese*** concentration found does not pose a health risk.

DOH RECOMMENDATIONS

1. Continue to monitor private wells quarterly.
2. Health education should be provided to residents who may still be concerned about exposures. (DOH will work closely with the Bremerton-Kitsap County Health District to provide this information and contact the community.)
3. Continue to monitor well BOW37 for volatile organic compounds to assure that vinyl chloride concentrations do not increase. If vinyl chloride levels show increasing trends or reach Federal Safe Drinking Water Act Maximum Contaminant Levels, exposures should be reduced/ eliminated. (DOH will continue to review and evaluate test results to determine future recommendations.)

or

Reduce or eliminate exposure to contaminants from this well.

4. Well BOW31A should be retested to assure that arsenic concentrations continue to remain below levels of health concern. (DOH can provide technical assistance if the owner pursues testing.)
5. Well BOW64 should be retested for lead by the owner to assure that concentrations remain below levels of concern.
6. Adhere to Ecology's March 1995 and 1998, letters recommending that the Bremerton-Kitsap County Health District limit its well site approval in the areas identified near the landfill.

DOH ACTIONS TO-DATE

DOH has worked closely with all the agencies involved to develop this fact sheet. Also, well users whose wells were impacted by the contaminants addressed in this fact sheet have been notified of the results.

FOR MORE INFORMATION

Call Paul Marchant for questions about this summary or if you would like to share health concerns. DOH is also available to present findings at a community meeting. Please call if you are interested.

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